

## SECTION J – ATTACHMENT III

### SECTION 508 COMPLIANCE

All products and services that are electronic and information technology must be delivered in compliance with the electronic and information technology (EIT) Access Board standards. Refer to [www.access-board.gov](http://www.access-board.gov).

All EIT products must comply with the following standards:

- o 36 CFR Part 1194 Section 21-Software applications and operating systems
- o 36 CFR Part 1194 Section 22-Web-based Intranet and Internet Information and Applications
- o 36 CFR Part 1194 Section 23-Telecommunication Products
- o 36 CFR Part 1194 Section 24-Video and Multimedia Products
- o 36 CFR Part 1194 Section 25-Self contained, closed products
- o 36 CFR Part 1194 Section 26-Desktop and Portable Computers
- o 36 CFR Part 1194 Section 41-Information, documentation, and support

The contractor shall deliver products and/or services that provide the features described in the above standards, or equivalent salient characteristics. Additionally, the contractor shall provide product support documentation and services (i.e. help desk and training) in alternate formats in order to accommodate end users with disabilities.

#### J-III.1 SECTION 508 COMPLIANCE TABLE

In accordance with Section 508 of the Rehabilitation Act of 1973, all electronic and information technology (EIT) products must comply with various accessibility standards (36 CFR Part 1194) as follows:

<b><u>Computer/Laptop</u></b>	1194.26, 1194.41	
Mouse	Not EIT	If the product comes with software, then 1194.21 applies.
Compact Disk (CD) Player/Recorder	Not EIT	If the product comes with software, then 1194.21 applies. If the product is a standalone, then 1194.25 applies.
Floppy Disk	Not EIT	
Optical Disk	Not EIT	
Digital Video Disk (DVD) Player/Recorder	1194.24, 1194.41	If the product comes with software, then 1194.21 applies. If the product is a standalone, then 1194.25.
Keyboard	1194.26, 1194.41	
Monitor	1194.26, 1194.41	If the product supports TV, DVD or broadcast, then 1194.24 applies.
Speakers	Not EIT	
Central Processing Unit (CPU)	Not EIT	
Modems	1194.21, 1194.41	If the product supports voice i.e. telephone, then 1194.23 applies.

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Memory (ROMS, RAM, EPROMS)	Not EIT	
Video Cards	1194.24, 1194.41	If the product comes with software, then 1194.21 applies.
Hardware Drives	1194.21, 1194.41	If the product comes with software, then 1194.21 applies.
Flash Drives	1194.21, 1194.41	If the product comes with software, then 1194.21 applies.
<b><u>Software</u></b>	1194.21, 1194.41	
Operating Systems	1194.21, 1194.41	
Application Software	1194.21, 1194.41	If product comes with a video, then 1194.24 applies.
Installation programs	1194.21, 1194.41	
<b><u>Video &amp; Multimedia Products</u></b>	1194.24, 1194.41	
Compact Disk	Not EIT	
DVD	1194.24, 1194.41	
Video Tape	1194.24, 1194.41	
Video Cards	1194.24, 1194.41	If the product comes with software, then 1194.21 applies.
<b><u>Information / Documentation / Support</u></b>	1194.41	
EIT Services (Hiring Labor Categories i.e. Web developers, EIT experts)	1194.21, 1194.22, 1194.24, 1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Help Desk –The support service for products shall accommodate the communication needs of end-users with disabilities.	1194.21, 1194.22, 1194.23, 1194.24, 1194.25, 1194.26 1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Maintenance on printers, copiers and fax The support service for products shall accommodate the communication needs of end-users with disabilities.	1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Leasing on printers, copiers and fax The support service for products shall accommodate the communication needs of end-users with disabilities.	1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Local Area Network	1194.23, 1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Wide Area Network	1194.23, 1194.41	Labor Categories are required to be knowledgeable of Section 508 standards.
Router		EIT, back office exemption applies.
Switch		EIT, back office exemption applies.
Server (rack mountain)		EIT, back office exemption applies.
<b><u>Telecommunications Products</u></b>	1194.23, 1194.41	
Telephones	1194.23, 1194.41	

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Modems	1194.23, 1194.41	
Blackberry	1194.21, 1194.22, 1194.23, 1194.31, 1194.41	
Cell Phones	1194.21, 1194.22, 1194.23, 1194.31, 1194.41	
PDA	1194.21, 1194.22, 1194.23, 1194.31, 1194.41	
Pager	1194.23, 1194.31	<b>Note:</b> Review the requirement. Fundamental alteration may apply.
Answering Service The support service for products shall accommodate the communication needs of end-users with disabilities.	1194.23, 1194.41	
Modems	1194.21, 1194.41	If the product supports voice i.e. telephones, then 1194.23 applies.
<b><u>Self Contained, Closed Products</u></b>	1194.25, 1194.41	
Printers	1194.21, 1194.25, 1194.41	
Copiers	1194.25, 1194.41	
Kiosks (ATM Machines, Employee Locators)	1194.25, 1194.31 1194.41	
Fax Machines	1194.23, 1194.25, 1194.41	
Calculators	1194.25, 1194.41	
Clocks	Not EIT	
Digital Camera	1194.21, 1194.25, 1194.31, 1194.41	
Scanners	1194.25, 1194.41	
Overhead Projector	1194.25, 1194.41	
Camcorder	1194.25, 1194.41	
<b><u>NAS</u></b>		
SF-2152 Exemption		FAA Exception, Program Manager has to certify that <b>only</b> 2152s operate NAS system.
<b><u>Computer Based Training</u></b>	1194.21, 1194.22, 1194.31, 1194.41	If the product is web based, then 1194.22 applies.

**J-III.2 1194.21 SOFTWARE APPLICATIONS AND OPERATING SYSTEMS**

(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from keyboard where the function itself or the result of performing a function can be discerned textually.

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(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.

(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.

(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.

(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.

(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.

(g) Applications shall not override user selected contrast and color selections and other individual display attributes.

(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.

(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting response, or distinguishing a visual element.

(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.

(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.

(l) When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

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#### **J-III.3 1194.22 WEB-BASED INTRANET AND INTERNET INFORMATION AND APPLICATIONS**

- (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).
- (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
- (c) Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
- (d) Documents shall be organized so they are readable without requiring an associated style sheet.
- (e) Redundant text links shall be provided for each active region of a server-side image map.
- (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
- (g) Row and column headers shall be identified for data tables.
- (h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.
- (i) Frames shall be titled with text that facilitates frame identification and navigation.
- (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
- (k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.
- (l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.
- (m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).

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(n) When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

(o) A method shall be provided that permits users to skip repetitive navigation links.

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

**J-III.4 1194.23 TELECOMMUNICATIONS PRODUCTS**

(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.

(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.

(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.

(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.

(e) Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYs, and for users who cannot see displays.

(f) For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.

(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.

(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.

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(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.

(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.

(k) Products which have mechanically operated controls or keys, shall comply with the following:

- (1) Controls and keys shall be tactilely discernible without activating the controls or keys.
- (2) Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2 N) maximum.
- (3) If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.
- (4) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

### **J-III.5 1194.24 VIDEO AND MULTIMEDIA PRODUCTS**

(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, wide screen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.

(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.

(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

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(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.

#### **J-III.6 1194.25 SELF CONTAINED, CLOSED PRODUCTS (KIOSKS, ATMs, etc.)**

(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach assistive technology to the product. Personal headsets for private listening are not assistive technology.

(b) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

(c) Where a product utilizes touch screens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.

(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.

(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.

(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.



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(j) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following:

- (1) The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length (see Figure 1 of this part).
- (2) Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.
- (3) Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.
- (4) Operable controls shall not be more than 24 inches behind the reference plane (see Figure 2 of this part).

#### **J-III.7 1194.26 DESKTOP AND PORTABLE COMPUTERS**

(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).

(b) If a product utilizes touch screens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).

(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.

(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.

#### **J-III.8 1194.41 INFORMATION, DOCUMENTATION, AND SUPPORT**

(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.

(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.

(c) Support services for products shall accommodate the communication needs of end-users with disabilities.